

What is claimed is:

1. A trash can assembly, comprising:
 an outer shell having an upper end and a lower end;
 a base secured to the lower end of the outer shell;
 5 a lid pivotably coupled to the upper end of the outer shell for movement between an open position and a closed position, the lid experiencing a closing force when the lid pivots from the open position to the closed position;
 a pedal pivotably coupled to the base, and having an inner end;
 a link rod having an upper end pivotably coupled to the lid and a lower end coupled
 10 to the inner end of the pedal; and
 an elastic element coupled to the base, the elastic element applying a varying force to dampen the closing force of the lid.
2. The assembly of claim 1, wherein the elastic element is a first elastic element, and further including a second elastic element coupled to the base, the second
 15 elastic element applying a force to dampen the opening of the lid.
3. The assembly of claim 2, wherein the second elastic element is attached to the base adjacent the link rod.
- 20 4. The assembly of claim 1, wherein the elastic element has a curved configuration.
5. The assembly of claim 1, wherein the pedal is coupled to the base by a pivot bar, and wherein the elastic element is attached to the base adjacent the pivot bar.
- 25 6. The assembly of claim 1, wherein the entire link rod is positioned inside the interior of the outer shell.
7. The assembly of claim 1, wherein the lid is pivotably coupled to the upper
 30 end of the outer shell about a pivot axis for movement between the open position and the closed position, with the pivot axis positioned inside the interior of the outer shell.

8. A trash can assembly, comprising:

an outer shell having an interior, an upper end and a lower end;

a base secured to the lower end of the outer shell;

5 a lid pivotably coupled to the upper end of the outer shell for movement between an open position and a closed position;

a pedal pivotably coupled to the base, and having an inner end; and

a link rod having an upper end pivotably coupled to the lid and a lower end coupled to the inner end of the pedal, with the entire link rod being positioned inside the interior of the outer shell.

10

9. The assembly of claim 8, wherein the lid is pivotably coupled to the upper end of the outer shell about a pivot axis for movement between the open position and the closed position, with the pivot axis positioned inside the interior of the outer shell.

15

10. The assembly of claim 8, further including a support frame attached to the upper end of the outer shell, the support frame having a straight portion that lies inside the interior of the outer shell, with an opening defined between the upper end of the outer shell and the straight portion, so that the upper end of the link rod extends through the opening.

20

11. The assembly of claim 10, wherein the opening lies inside the interior of the outer shell.

12. A trash can assembly, comprising:

an outer shell having an interior, an upper end and a lower end;

25

a base secured to the lower end of the outer shell;

a lid pivotably coupled to the upper end of the outer shell about a pivot axis for movement between an open position and a closed position;

a pedal pivotably coupled to the base, and having an inner end; and

30 a link rod having an upper end pivotably coupled to the lid and a lower end coupled to the inner end of the pedal;

wherein the pivot axis is positioned inside the interior of the outer shell.

13. The assembly of claim 12, further including a support frame attached to the upper end of the outer shell, the support frame having a straight portion that lies inside the interior of the outer shell, with an opening defined between the upper end of the outer shell and the straight portion, so that the upper end of the link rod extends through the opening.

5

14. The assembly of claim 13, wherein the opening lies inside the interior of the outer shell.

15. A trash can assembly, comprising:

10

an outer shell having an upper end;

a lid pivotably coupled to the upper end of the outer shell for movement between an open position and a closed position;

a mounting bracket provided on the lid and having at least one through hole;

a channel provided at the upper end of the outer shell and defining a bore;

15

a pivot bar that is received inside the at least one through hole and the bore to pivotably couple the lid to the outer shell; and

a locking bolt that extends through a portion of the mounting bracket to removably engage the pivot bar.

20

16. The assembly of claim 15, wherein the at least one through hole is aligned with the bore.

17. The assembly of claim 15, wherein the mounting bracket includes a transverse bore through which the locking bolt is extended.

25

18. A method of dampening the closing motion of a pivotable lid that is pivotably coupled to an upper end of an outer shell of a trash can assembly, where the lid creates a closing force during its closing motion, comprising:

counter-balancing the closing force of the lid.

30

19. The method of claim 18, wherein the trash can assembly further includes a pivoting pedal bar that is coupled to the lid via a link rod, and wherein the counter-balancing step further comprises:

- 5 generating a counter-balance force against the pedal bar that is equal to or slightly less than the closing force of the lid.

20. The method of claim 19, wherein the counter-balance force varies during the closing motion of the lid.